Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

1. **(Amended)** A power supply for driving opposing corona chargers comprising:

a pair of transformers on the power supply, each of the transformers providing an output;

a current sense element attached to each of the transformers;

a current regulation circuit that is responsive to each of the current sense circuits in accordance with a predetermined parameter to adjust current flowing through the transformers;

a voltage monitoring circuit for each of the transformers; ~~and~~

a voltage control circuit that is responsive to the output voltage monitoring circuit to limit the transformer voltage to less than a predetermined value; and

a clock generation circuit that provides synchronized clocks of opposite polarities to each of the transformers creating AC outputs to the transformers.

2. **(Original)** The power supply of claim 1 wherein the current regulation circuit is a DC-to-DC converter that responds to the current sense circuit by adjusting the transformer voltage.

3. **(Original)** The power supply of claim 1 wherein the current sense circuit is configured to sense voltage from the transformer secondary.

4. **(Original)** The power supply of claim 3 wherein the current sense circuit that is configured to sense voltage from the transformer secondary senses a voltage developed by the flow of current through an element in the series with the transformer secondary.

5. **(Cancel)** The power supply of claim 1 further comprising a clock generation circuit that provides synchronized clocks of opposite polarities to the transformer creating AC outputs to the transformers.

6. **(Amended)** The power supply of claim [5]1 wherein each of the transformers have a pair of primary coils that are electrically connected to opposite phases of the clock generation circuit.

7. **(Original)** The power supply of claim 6 wherein both the transformers have the primary coils receiving opposite clocks phases such that the transformer secondary coils are synchronized to provide opposing AC outputs.

8. **(Original)** The power supply of claim 1 further comprising a current signal conditioning circuit connected to each of the current sense elements.

9. **(Original)** The power supply of claim 1 wherein the current regulation circuit is a DC-to-DC converter that can be programmed to regulate current through a range by adjusting the transformer voltage and also programmed responsive to the voltage monitoring circuit to limit the transformer voltage.

10. **(Amended)** A power supply for driving a corona charger comprising:

a pair of outputs to the power supply;

at least one current sense element connected to the power supply;

at least one voltage monitoring circuit connected to the power supply; and

a DC-to-DC converter that is programmed to regulate current through a range of loads in response to the current sense element and also programmed as a voltage limiting device for the power supply; and

a clock generation and inverter circuit connected to the power supply to provide synchronizing and opposing AC outputs.

11. **(Cancel)** The power supply of claim 10 further comprising a clock generation and inverter circuit connected to the power supply to provide synchronizing and opposing AC outputs.

12. **(Amended)** The power supply of claim [11]10 wherein the current sense element is configured to sense voltage from the transformer secondary.

13. **(Original)** The power supply of claim 12 wherein the current sense element that is configured to sense voltage from the transformer secondary senses a voltage developed by the flow of current through an element in the series with the transformer secondary.

14. **(Original)** The power supply of claim 10 further comprising a current signal conditioning circuit connected to the current sense element.

15. **(Amended)** A method for supplying power to a corona charger to regulate current without exceeding voltage limitations comprising the steps of:

providing a pair transformers driven at their input with a clock generation and inverter circuit connected to a power supply to ~~have~~ provide synchronized opposite phases of an AC signal;

connecting a programmable regulator to the transformers output to apply a DC voltage level at the transformers output;

sensing current being sourced through the transformers by circuitry operatively connected to the transformers inputs and the programmable regulator;

adjusting the DC voltage level provided by the programmable regulator at the transformer output in response to the sensing step;

sensing voltage applied to the transformer output; and

responding via the programmable regulator to limit voltage applied to the transformers output in excess of a predetermined amount.

16. **(Original)** The method of claim 15 wherein the step of connecting further comprises connecting a DC-to-DC converter as the programmable regulator, and the DC voltage level applied by the regulator is responsive to sensed current from the transformers to keep current flowing through the transformers constant.

17. **(Original)** The method of claim 16 wherein the step of connecting further comprises responding to voltage sensed at the transformer output to limit the transformer output voltage to a predetermined amount.

18. **(Original)** The method of claim 17 wherein the step of connecting further comprises the DC-to-DC converter being programmed to regulate current through a range by adjusting the transformer voltage.